

***What is Claimed Is:***

1. A coil winding machine for wrapping at least one coil wire around a core wire,  
the coil winding machine comprising:

5 a. a spindle head;  
b. a non-rotatable spindle nose operatively connected to said spindle  
head, the core wire traveling at least through said spindle nose;

c. a flywheel rotatably connected to said spindle head, said flywheel  
having at least one wire spool for holding the at least one coil wire and at least one first wire  
10 guide, wherein said flywheel rotates about said spindle nose; and

d. an applicator head for wrapping the at least one coil wire around the  
core wire, said applicator head operatively connected to said flywheel for rotation therewith,  
and said applicator head being adjacent to said spindle nose.

2. The coil winding machine of claim 1, said applicator head further comprising a  
15 wire guide spacer.

3. The coil winding machine of claim 1, said applicator head further comprising  
at least one wire guide pin.

4. The coil winding machine of claim 1, said applicator head further comprising a  
pressure adjustment plate.

20 5. The coil winding machine of claim 1, said applicator head further comprising  
at least one pressure pad.

6. The coil winding machine of claim 1, said applicator head further comprising a  
hinged cover.

7. The coil winding machine of claim 1, wherein there are four wire spools.

8. The coil winding machine of claim 1, wherein there are four first wire guides.
9. The coil winding machine of claim 1, further comprising a wire payoff.
10. The coil winding machine of claim 1, further comprising a pull roll assembly.
11. The coil winding machine of claim 1, further comprising a counterweight  
5 operatively connected to said flywheel.

12. The coil winding machine of claim 1, said applicator head further comprising at least one wire guide insert.

13. The coil winding machine of claim 12, wherein said at least one wire guide is made of carbide.

10 14. The coil winding machine of claim 1, further comprising at least one second wire guide.

15. The coil winding machine of claim 14, wherein there are four second wire guide.

16. A coil winding machine comprising:

15 a. core wire feed assembly for providing a core wire, said core wire feed assembly having a wire payoff and a straightener;

b. a pull roll assembly for pulling said core wire, said pull roll assembly having at least one drive wheel and at least one driven wheel in frictional contact with said at least one drive wheel;

20 c. a spindle head assembly located between said core wire feed assembly and said pull roll assembly, said spindle head assembly comprising:

i. a non-rotatable spindle nose, said core wire traveling at least through said spindle nose;

ii. a rotatable flywheel having at least one wire spool for holding a coil

wire and at least one wire guide, wherein said flywheel rotates about said spindle nose; and

- iii. an applicator head for wrapping said coil wire around said core wire, said applicator head operatively connected to said flywheel for rotation therewith.

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17. The coil winding machine of claim 16, wherein said applicator head includes at least one wire guide insert.

18. The coil winding machine of claim 16, wherein said applicator head includes at least two wire guide pins.

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19. The coil winding machine of claim 16, wherein said applicator head includes a pressure adjustment plate.

20. The coil winding machine of claim 16, wherein said applicator head includes at least one pressure pad.

21. The coil winding machine of claim 16, wherein there are four wire spools.

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22. The coil winding machine of claim 16, wherein there are four wire guides.

23. A method of assembling a coil winding machine comprising the steps of:

- a. providing a spindle head;
- b. connecting a spindle nose to said spindle head;
- c. rotatably connecting a flywheel to said spindle head;
- d. connecting at least one wire spool to said flywheel;
- e. connecting at least one wire guide to said flywheel; and
- f. connecting an applicator head to said flywheel.

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24. The method of claim 23, further comprising the step of connecting a wire guide insert to said applicator head.

25. The method according to claim 23, further comprising the step of connecting a wire guide pin to said applicator head.